AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111
Serial Number: 10/660,380
Filing Date: September 11, 2003
Title: SYSTEM AND METHOD FOR SHARING GLOBAL DATA WITHIN DISTRIBUTED COMPUTING SYSTEMS

Page 15
Dkt: 1370.007US1

REMARKS

This responds to the Office Action mailed on <u>April 28, 2006</u>, and the references cited therewith.

Claims 42 and 61-63 are amended, no claims are canceled, and no claims are added; as a result, claims 1-63 remain pending in this application.

§*102 Rejection of the Claims*

Claims 1-63 were rejected under 35 U.S.C. § 102(b) for anticipation by Chen et al. (<u>MultiJav: A Distributed Shared Memory System Based on Multiple Java Virtual Machines</u>, Utah State University, 1998).

Chen describes a distributed shared memory system based on multiple Java Virtual Machines (JVM). MultiJav is a distributed implementation of JVM capable of sharing data across a distributed computing system. As the Examiner notes, MultiJav can be used to distribute processes of an application across two or more nodes as "multiple copies of the shared objects can exist among sites." Each site maintains a global handle table. Each global handle is a combination of the identity of the Java Virtual Machine where the data resides and a local handle for that Machine.

Like Applicant, Chen notes the downside of page-based distributed shared memory (DSM) runtime systems. Chen, for instance, recognizes, like Applicant, that one problem with DSM runtime systems is the high cost of false sharing. Likewise, Chen notes that object-based systems carry the burden of message passing between nodes (e.g., the acquire/store operations).

In contrast to Applicant, Chen maintains a visible trail back to the object. What Chen terms "global handles" are merely a combination of VM address and local handle (see Slide 1, page 5). Applicant, on the other hand, uses a unique global handle to access data associated with a data object. The sharing of object data has been transformed to the sharing of handles.

> What has been accomplished, then, is that the sharing of the data in the system has been mapped to the sharing of handles in the system. Furthermore, the transformation of the problem into the handle domain effectively allows one to treat the sharing of data as a DSM [distributed shared memory] problem, for the space of handles can be viewed as a shared virtual address range.

Applicant, p. 5, lines 15-19. As described by Applicant and claimed in claims 1-63, this transformation is accomplished by, first, mapping the name of an object to a unique and global handle and, second, by treating the handle as a shared virtual address. Applicant, p. 6, lines 4-6. Chen does not describe the type of global handle described and claimed by Applicant.

The Examiner stated that "handles have a name assigned to them otherwise they are useless." Applicant respectfully submits that the "name" referenced here is not the name of the global handle. Rather, it is the name of the data object. If one simply used the name of the data object as a global handle, one would not be able to use the DSM features described by Applicant. Instead, as described by Applicant and claimed in claims 3, 9, 19, 20, 33 and 42-44, the name of the data object can, in certain circumstances, be used to determine the global handle, but not to directly access the data itself.

Reconsideration of claims 1-63 and issuance of a Notice of Allowance is respectfully requested.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111
Serial Number: 10/660,380
Filing Date: September 11, 2003
Title: SYSTEM AND METHOD FOR SHARING GLOBAL DATA WITHIN DISTRIBUTED COMPUTING SYSTEMS

Page 17
Dkt: 1370.007US1

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6909 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.
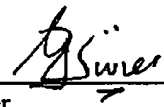
Respectfully submitted,

STEPHEN BELAIR ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 373-6909

Date ___7/27/2006___   By _____

Garth Vivier
Reg. No. 57,313

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 27 day of July 2006.

JONATHAN FERGUSON   _____

Name   Signature